

REMARKS

It will be seen that the original 1-20 have been canceled in favor of new claims 21-54. Claims 21-36 and 41 and 42 are drawn to a control device and claims 46-49 to a low profile control device. Claim 37 is a combination of a keyboard and the control device and claims 38 and 39 are a combination of a computer with the control device. Claims 40 and 43-45 are drawn to a combination of a laptop computer and the control device and claims 50-54 are claims to a method of controlling the position of a cursor on a computer with the control device.

All of the claims require that the control member is mounted for limited travel in the x and y directions on a fixed mounting and it is submitted that none of the references cited against the parent application teach this.

Looking at Figures 1 and 2 of the instant application the sensors 13 and 14 detect the x and y forces respectively (the x and y directions being illustrated in Figure 1). The patent to Kuo, U.S. Patent 5973671 cited in the parent application, has sensors detecting z forces. Specifically Kuo teaches that the button 20 is "rotated by being manually depressed" (col. 14 line 19) i.e. tilted on the ball end 34 of post 33 by pressure from the user's palm on a specific peripheral region thereof. Incidentally it is implicit from the presence of click button 35 (fig. 1 and col. 5 penultimate paragraph) that member 20 is located and dimensioned to be acted upon by the user's palm since the click buttons are spaced apart from member 20 and "act like the counterpart in a conventional mouse" (col. 5 lines 26 and 27) and would therefore be acted upon by the user's fingertips.

It may be argued that a user might attempt to operate the Kuo device by pushing the top center of member 20 in the x or y direction but the small resulting torque generated about the closely adjacent center of ball end 34 would not be sufficient to generate enough force at the periphery of member 20 to collapse one or more

projections 41 and move the cursor. Generation of sufficient force by fingertip pressure would be particularly unlikely to generate sufficient force. In any case such a mode of use is neither disclosed nor suggested by Kuo.

Only z-forces are generated by the user in Kuo, and the sensors respond only to z-forces, therefore the transmission of x and y forces is neither disclosed nor suggested by Kuo.

Should one attempt to combine the patent to Selker et al, U.S. Patent 5867808, it is necessary that the Selker and Kuo patents be considered as a whole and contain suggestions, facility and desirability to combine the teachings of one with the other.

Considering the Kuo and Selker references as a whole, far from suggesting the desirability of the combination, it is difficult to see how they could be combined even if one assumes some motivation to do so. In particular, incorporating the x and y strain sensors of Selker in the button-operated devices of Kuo would be inconsistent with the first object clause of Kuo (col. 2 lines 11 to 18) which requires a button "controlling engagement of a plurality of conductors, each representing a different direction" in the x - y plane. Hence the substitute of x and y force sensors from Selker in Kuo would be contrary to the teaching of Kuo and would change its principle of operation.

Alternatively, if one were to start with the Kuo device and substitute the lever of Selker for the member 20, this would not result in the device of the present invention because the top of the lever is acted upon by one fingertip and is too small to be acted upon by spaced apart finger tips and because the device would utilize "a plurality of conductors, each representing a different direction" rather than transducer means responsive to x and y components of force.

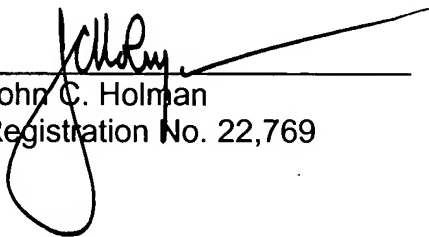
In view of the above it is believed that claims limited to the transmission of x and y force components are now patentable over the combination of Kuo and Selker. New claims 21-54 have this limitation in them and consequently should be found allowable.

Attached hereto as Exhibit A is a summary by the inventor of the instant application which shows by reference to prior publications and websites the long felt need for a better pointing device for computers, and in particular laptop computers.

Early examination on the merits of the claims is courteously awaited.

Respectfully submitted,

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Enclosure: Copy Exhibit A